### **Rec'd PCT/PTO** 19 JUL 2004

# **MONAL SEARCH REPORT**

PCT/IB 03/00968

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C12N15/11 C07k C07K14/28 C07K14/195 CO7K14/245 C07K14/285 C07K14/295 C07K14/32 A61K39/00 CO7K14/705 C07K14/21 A61K38/04 According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system followed by classification symbols) C12N C07K A61K IPC 7 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, CHEM ABS Data, MEDLINE, BIOSIS, WPI Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. Category ° 1,2 WO 96/05858 A (WASHINGTON & STANFORD Α UNIVERSITIES) 29 February 1996 (1996-02-29) the whole document 1,2 M VAN SCHILFGAARDE ET AL.: "Cloning of X genes of nontypeable Haemophilus influentiae involved in penetration between human lung epithelial cells" INFECTION AND IMMUNITY., vol. 68, no. 8, August 2000 (2000-08), pages 4616-4623, XP002258337 AMÉRICAN SOCIETY FOR MICROBIOLOGY. WASHINGTON., US ISSN: 0019-9567 the whole document Further documents are listed in the continuation of box C. Patent family members are listed in annex. X Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but "A" document defining the general state of the art which is not considered to be of particular relevance cited to understand the principle or theory underlying the invention "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Date of the actual completion of the international search

Date of mailing of the international search report

"&" document member of the same patent family

17 October 2003

other means

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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2

"O" document referring to an oral disclosure, use, exhibition or

"P" document published prior to the international filing date but later than the priority date claimed

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. X Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:  see FURTHER INFORMATION sheet PCT/ISA/210
2. X Claims Nos.:  1, 11-13, 19, 26-27  because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  See FURTHER INFORMATION sheet PCT/ISA/210
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)
This International Searching Authority found multiple inventions in this international application, as follows:
see additional sheet
As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  1,2, 11-13, 19, 26, 27 (partially)
Remark on Protest  The additional search fees were accompanied by the applicant's protest.  No protest accompanied the payment of additional search fees.

Continuation of Box I.1

Although claims 52 and 54-55 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Although claims 19-24 (at least partially) are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Continuation of Box I.2

Claims Nos.: 1, 11-13, 19, 26-27

Present claims 1, 11-13, 19, 26-27 relate to an extremely large number of possible compounds and methods based on them. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compounds. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts relating to the compounds as further limited by claim 2, seq. id. no. 1 (see also motivations for the non-unity objections) and methods based on them.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 1 of claim 2 and methods based on it.

2. claims: 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 2 of claim 2 and methods based on it.

3. claims: 6 and 20 (completely) and 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 3 of claim 2 and methods based on it.

4. claims: 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 4 of claim 2 and methods based on it.

5. claims: 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 5 of claim 2 and methods based on it.

6. claims: 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 6 of claim 2 and methods based on it.

7. claims: 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 7 of claim 2 and methods based on it.

8. claims: 7 and 21 (completely) and 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 8 of claim 2 and methods based on it.

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#### (partially)

Penetrating peptides as described by the Seq. Id. no. 9 of claim 2 and methods based on it.

10. claims: 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 10 of claim 2 and methods based on it.

11. claims: 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 11 of claim 2 and methods based on it.

12. claims: 9 and 24 (completely) and 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 12 of claim 2and methods based on it.

13. claims: 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 13 of claim 2 and methods based on it.

14. claims: 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 14 of claim 2 and methods based on it.

15. claims: 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 15 of claim 2 and methods based on it.

16. claims: 10 and 24 (completely) and 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 24 of claim 2 and methods based on it.

17. claims: 1-2, 11-13, 19, 26-27 (partially)

18. claims: 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 26 of claim 2 and methods based on it.

19. claims: 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 27 of claim 2 and methods based on it.

20. claims: 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 28 of claim 2 and methods based on it.

21. claims: 1-2, 11-13, 19, 26-27 (partially)

Penetrating peptides as described by the Seq. Id. no. 29 of claim 2 and methods based on it.

22. claims: 4-5 (completely) and 2, 11-13, 19, 26-27 (partially)

Variants of penetrating peptides as described in claim 2 (b) and methods based on them.

23. claims: 3 (completely) and 2, 11-13, 19, 26-27 (partially)

Fragments of penetrating peptides as described in claim 2 (c) and (d) and methods based on them.

24. claims: 14-18, 39-51, 77-78 (completely), 26-27 (partially)

Peptides of claim 14 coupled to effectors (conjugates thus), methods to produce them and methods based on them.

25. claims: 25, 28-38, 76 (completely) and 26-27 (partially)

Penetrating peptides of claim 25 fused to effectors (fusion proteins thus), methods to produce them and methods based on them.

26. claims: 52-56 and 79-80 (complete)

Pharmaceutical or prophylactical preparations containing

27. claims: 57-59 (completely)

Penetrating peptides deriving from pathogenic bacteria.

28. claims: 60-62 (completely)

Penetrating peptides deriving from non-pathogenic bacteria.

29. claim: 63 (completely)

Penetrating peptides deriving from human neurokinin receptors.

30. claims: 64-74 (completely)

Penetrating modules according to claim 64, i. e. sequences as described in claim 64 coupled to molecular vessels.

31. claim: 75 (completely)

Pharmaceutical preparations containing penetrating modules according to claim 64, i. e. sequences as described in claim 64 coupled to molecular vessels.

## INTERNATIONAL SEARCH REPORT

PCT/IR	03/00968
rci/10	03/00300

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
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